

Chapter 4

Environmental Resources

DRAFT

TABLE OF CONTENTS

SIGNIFICANT NATURAL ENVIRONMENTAL FACTORS.....	1
<i>Floodplains.....</i>	<i>1</i>
<i>Shorelines.....</i>	<i>2</i>
<i>Wetlands.....</i>	<i>3</i>
<i>Critical Habitat and Endangered Species.....</i>	<i>4</i>
<i>Geologic Conditions</i>	<i>5</i>
<i>Air Quality</i>	<i>5</i>
<i>Climate Vulnerability.....</i>	<i>5</i>
BUILT ENVIRONMENT FEATURES IN THE STUDY AREA	5
<i>Industrial.....</i>	<i>5</i>
<i>Retail and Commercial Areas.....</i>	<i>5</i>
<i>Residential Neighborhoods.....</i>	<i>6</i>
<i>Southridge Sub-area</i>	<i>6</i>
<i>Parks and Recreational Facilities</i>	<i>6</i>
<i>Schools</i>	<i>7</i>
<i>Public, Community, and Government Services.....</i>	<i>8</i>
<i>Noise</i>	<i>9</i>

Significant Natural Environmental Factors

Floodplains

A floodplain is any land area susceptible to being inundated by flood waters from any source. This is usually the flat or nearly flat land on the bottom of a valley. Two areas of the US 395 corridor study area are within a 100 year floodplain. Both pass under the highway at the 4th Avenue overcrossing and in the vicinity of the Burlington Northern and the Union Pacific Railroads overcrossing.

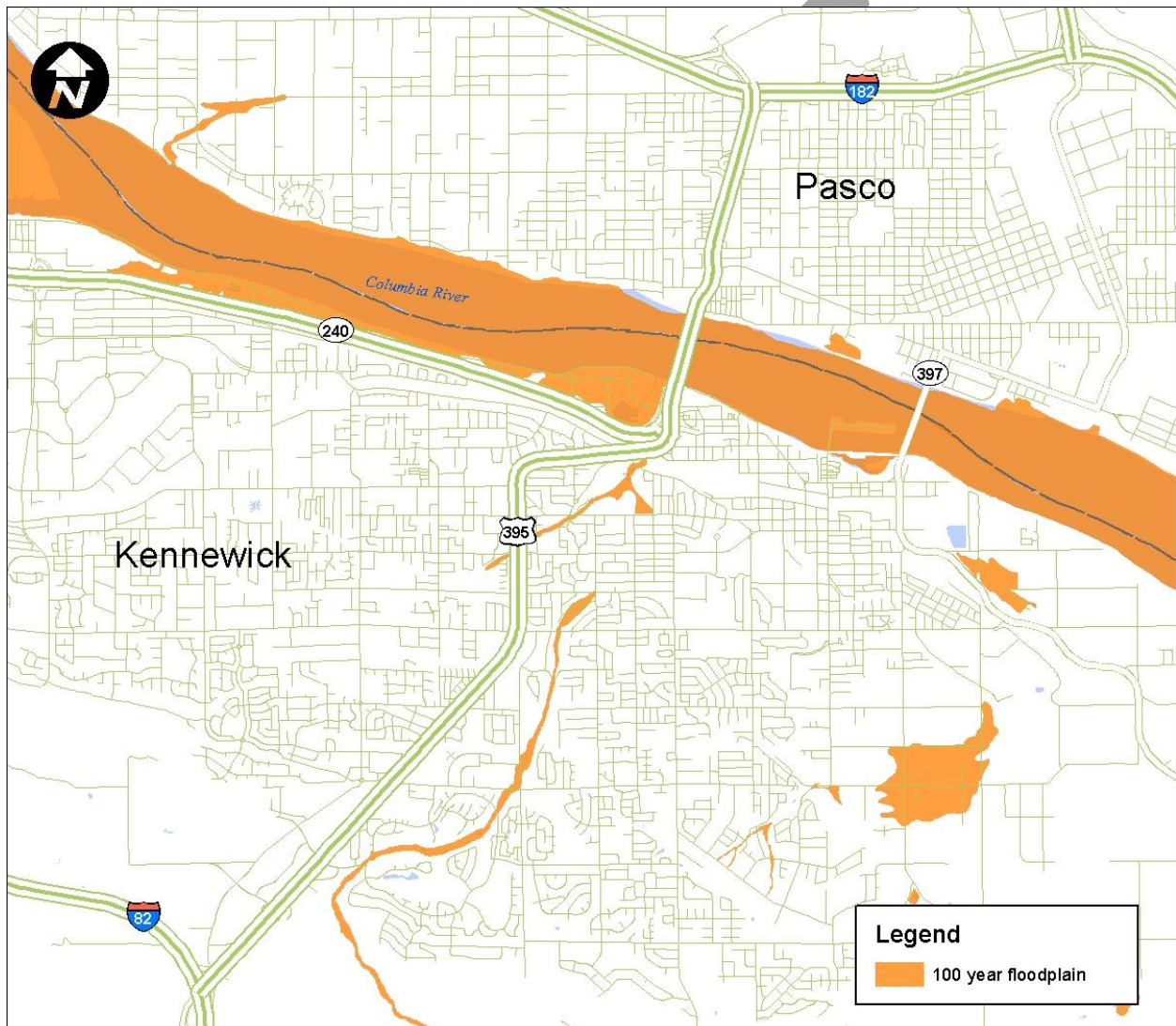


Figure 4-1 – Floodplains in US 395 Planning Study Corridor

References

FEMA Q3 flood data for Washington State Counties, 1996
WSDOT Environmental Procedures Manual, 2012

Shorelines

The Columbia River is designated as a shoreline of statewide significance and is managed by the Washington State Shoreline Management Act (SMA). The SMA was enacted in 1971 to provide for the management and protection of shorelines and requires cities and counties to adopt a Shoreline Master Program (SMP) to protect natural resources, provide for public access to public waters and shores, and plan for water-dependent uses. Both Pasco and Kennewick adopted SMPs in 1974. In 2003, the Shoreline Management Act Guidelines were adopted, requiring local governments to review and update their programs. The City of Kennewick updated their Shoreline Management Program in 2009.



Figure 4-2 – Columbia River shoreline in the US 395 vicinity

Kennewick Shoreline Existing Conditions

To the west of the Columbia River Bridge, the entire shoreline is accessible to the public via Columbia Park. A boat launch and recreational pond within the park are in the immediate vicinity of the bridge and interchange. The riparian habitat in this area is important for salmon, steelhead and other Columbia River species. To the east, a levee runs from the bridge to Clover Island. No access to the shoreline exists to the east of the bridge. An aquifer recharge area encompasses most of the US 395 corridor in Kennewick (see Figure 4-3).

Pasco Shoreline Existing Conditions

According to the City of Pasco's Comprehensive Plan, all significant aquifer recharge areas within Franklin County are located outside the Pasco UGA. A levee runs along the north side of the river in Pasco.

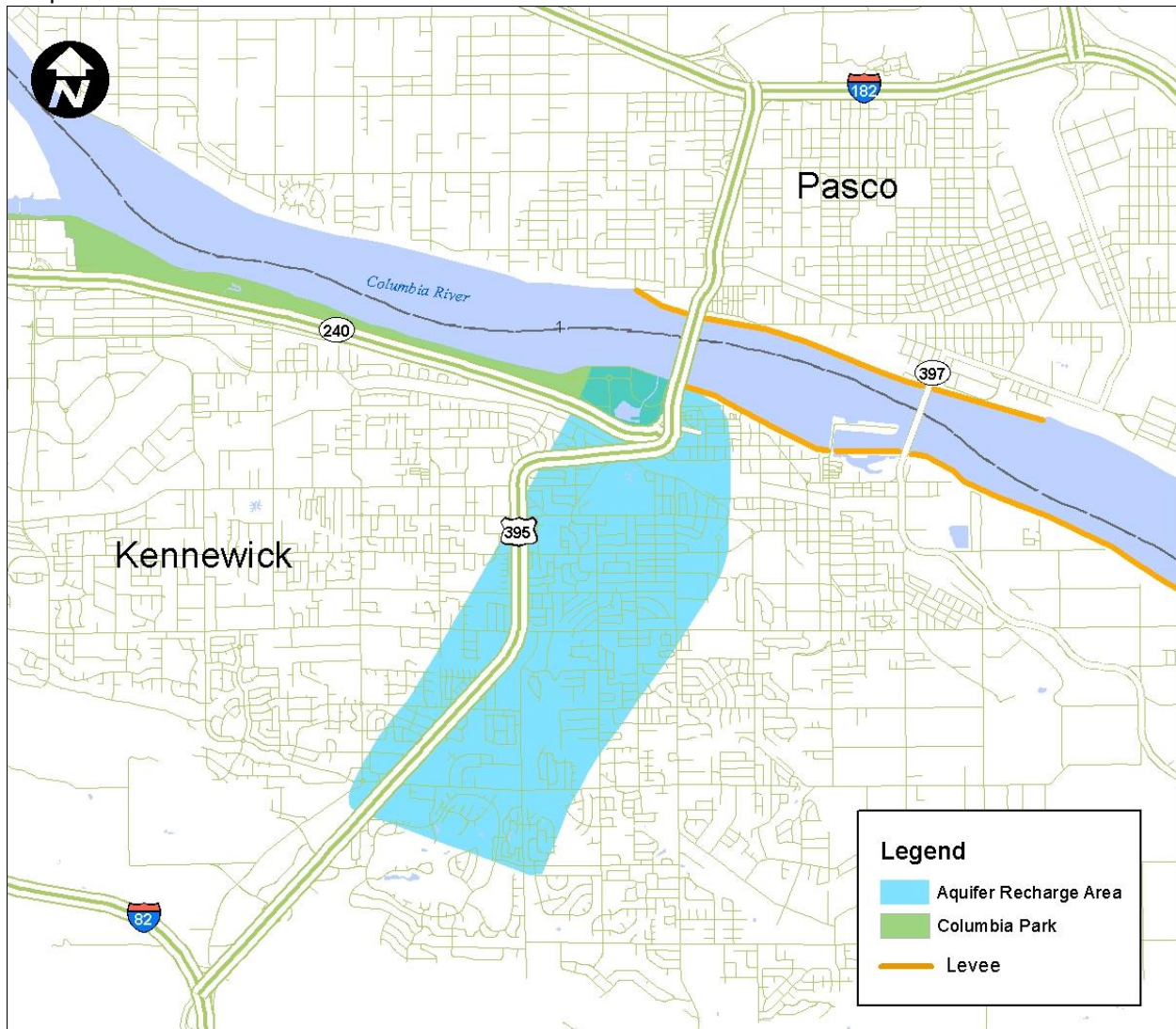


Figure 4-3 – Columbia River Shoreline Features

References

RCW 90.58, Shoreline Management Act of 1971
City of Kennewick Shoreline Management Program, 2009
Franklin County Shoreline Management Master Program, 1983

Wetlands

A wetland is defined as the transitional area between open water and uplands. Wetlands are covered or saturated with water for at least part of the year. Wetlands do not include deep water habitats, lakes, or un-vegetated streams and rivers. As shown on Figure 4-4, the only wetland in close proximity to US 395 is in Zintel Canyon, east of the US 395/10th Avenue intersection. It is unlikely any future improvements to the highway will impact any wetlands.

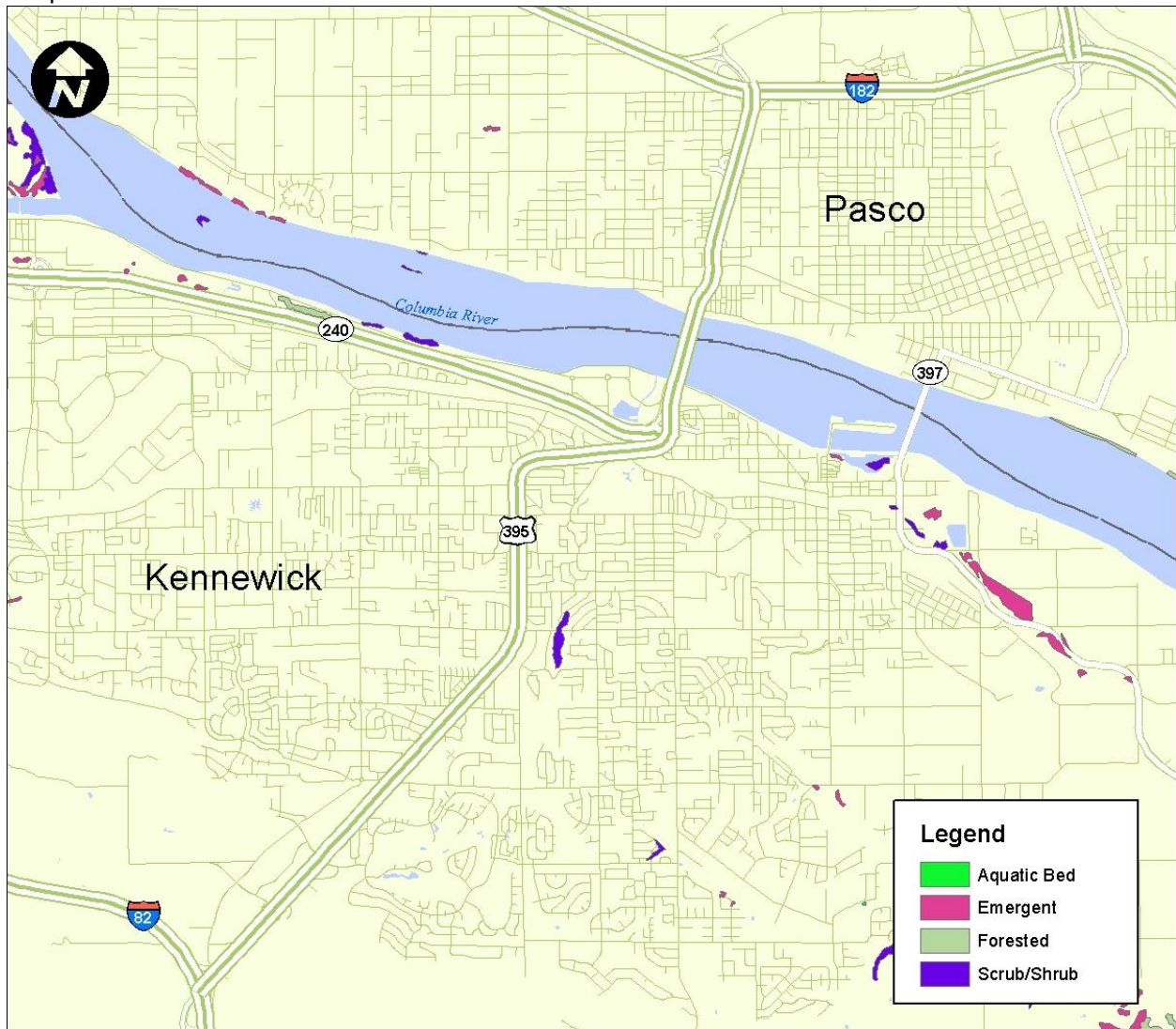


Figure 4-4 – Wetlands in the US 395 Planning Study Corridor

References

WSDOT GIS Workbench/National Wetlands Inventory (NWI)

Critical Habitat and Endangered Species

Aquatic

The Columbia River in the corridor area is foraging and migratory habitat for bull trout, steelhead, and Chinook salmon. Further, the National Marine Fisheries Service (NMFS) has designated the Columbia River as Critical Habitat for Bull Trout, Upper Columbia River Chinook and steelhead, and Middle Columbia River steelhead. Bull Trout are identified as endangered species according to the NMFS.

Terrestrial

No threatened or endangered terrestrial species, as defined by the Endangered Species Act, have been documented within approximately 60 miles of the corridor; however, Species of Concern have been documented in the vicinity. These include Townsend's Ground Squirrel, the Burrowing Owl, and the Peregrine Falcon. There is shrub-steppe habitat at the south end of the corridor.

References

National Marine Fisheries Services
WDFW Priority Habitats and Species Database

Geologic Conditions

The project area is in rolling terrain. The primary soil type is sand, loam, and gravel. According to the U.S. Geological Survey (USGS), the study corridor has relatively low levels of seismic activity.

References

US Geological Survey (USGS), Seismic Hazard Zones
United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), 2003
WSDOT Design Manual

Air Quality

The US 395 corridor study area is in attainment for particulates, ozone, and carbon monoxide. There are no identified air quality concerns for the study area.

References

Washington Department of Ecology, 2011

Climate Vulnerability

In 2012, WSDOT staff performed a Climate Vulnerability Assessment (CIVA) for all state highways. The CIVA assumed climate impacts would occur as identified in a University of Washington 2009 Climate Impacts Group assessment. These climate impacts included temperature changes, increases in extreme weather events, precipitation changes, sea level rise, fire risk, and high winds. The US 395 corridor study area had one of the lowest scores and is rated as “low” for climate vulnerability. As such, the study corridor is expected to be at low risk for impacts due to possible climate changes.

References

WSDOT Climate Impacts Vulnerability Assessment Team, 12/19/2012

Built Environment Features in the Study Area

Industrial

The primary industrial areas for both cities are not in proximity to US 395. In Kennewick the industrial areas are east of US 395 along Columbia Drive while in Pasco they are also east of the highway along Lewis Street and State Route 397. There is a small area zoned industrial at the south end of the corridor adjacent to US 395 and I-82. The City of Kennewick has a planned industrial area south of I-82.

Retail and Commercial Areas

As with many highway corridors, the US 395 corridor through Kennewick and Pasco is an important connector to commercial areas; however, the central business district for either city is not in the vicinity of US 395. For Kennewick, retail and commercial areas adjacent to US 395 are primarily located in the vicinity of Clearwater Avenue and Kennewick Avenue and along Columbia Drive. Smaller areas are located at 10th Avenue and 27th Avenue. In Pasco, retail/commercial areas are concentrated between Lewis Street and Court Street.

Residential Neighborhoods

There are a large number of neighborhoods adjacent to US 395 in Pasco and Kennewick; however, many are buffered by immediately adjacent commercial development. Most of these residential areas were developed before the route was designated as US 395.

Southridge Sub-area

Historically, the section of the study area south of 27th Avenue and west of US 395 was farmland. In 2000, the City of Kennewick published the Southridge sub-area plan. This plan identifies a 2,530 acre area south of Kennewick planned for future development. Access to this sub-area is proposed from US 395 at Hildebrand Boulevard and Ridgeline Drive. This sub-area includes a hospital, a large number of single and multi-family residences, retail businesses, and general offices. These changes in land use have substantially increased traffic volumes on US 395.

References

City of Kennewick Zoning, January 2013
City of Pasco Zoning, January 2013
Southridge Sub-Area Development, 2005

Parks and Recreational Facilities

Parks

Columbia Park is the major park in the Tri-Cities area paralleling the Columbia River (See Figure 4-5). It is adjacent to US 395 and is west of the Columbia River Bridge. Because the park is the primary point of access to the river, it is a major activity center for the City of Kennewick and draws thousands of visitors every year. Westgate Park also abuts US 395.

Recreational Facilities

The Southridge Sports Complex is a new outdoor sports complex in the Southridge area. It accommodates a variety of recreational activities like soccer, baseball, softball, lacrosse, football, or rugby. There are two golf courses in the corridor area. Canyon Lakes Golf Course is located to the east of the Hildebrand Boulevard intersection and the Tri-City County Club is southeast of the Yelm Street intersection (See Figure 4-5).

Historic Places

The Columbia River Bridge and the James Moore Mansion, located just west of the Columbia River Bridge in Pasco, are on the National Register of Historic Places.

Cultural Places

There are no culturally significant areas within the study corridor.

References

City of Kennewick Recreational Services, 2009
City of Kennewick 2006-2012 Comprehensive Parks and Recreation Plan
Franklin County GIS Data, 2010
Benton County GIS Data, 2009

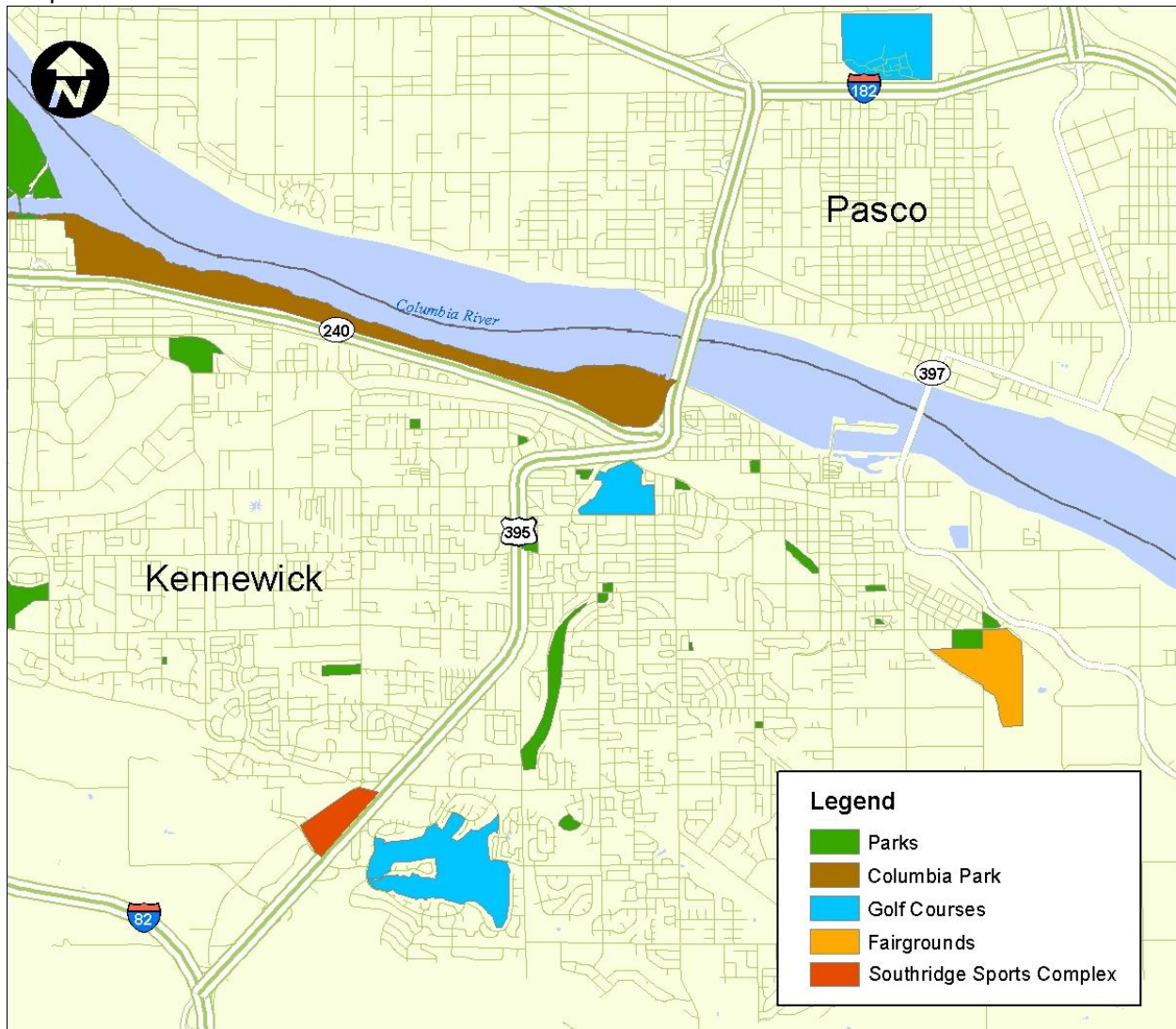


Figure 4-5 – Recreational Facilities in the corridor

Schools

There are no school zones immediately adjacent to US 395; however, there are six Kennewick public schools in the vicinity of the corridor:

- Southridge High School
- Southgate Elementary
- Lincoln Elementary
- Westgate Elementary
- Keewaydin Discovery Center
- Phoenix High School

Access to US 395 from the schools is via local streets.

Pasco has four public schools in the study area:

- Chess Elementary
- Frost Elementary
- Stevens Middle School

- Columbia Basin College (CBC)

CBC is located northeast of the I-182/US 395 interchange and has no direct access to the highway. The other schools have access to US 395 via the interchanges.

References

Benton County GIS Data, 2009

City of Pasco, 2012

Public, Community, and Government Services

These services include police and fire departments, hospitals, city administration buildings, schools, and colleges. These services do not typically generate large daily volumes of traffic; however, they are important to communities. It is important to note that traffic generated by public, community and government services generally does not coincide with the P.M. peak hour of US 395. Further, as shown on Figure 4-6, most public services are far removed from the corridor. All signals along US 395 provide emergency vehicle pre-emption.

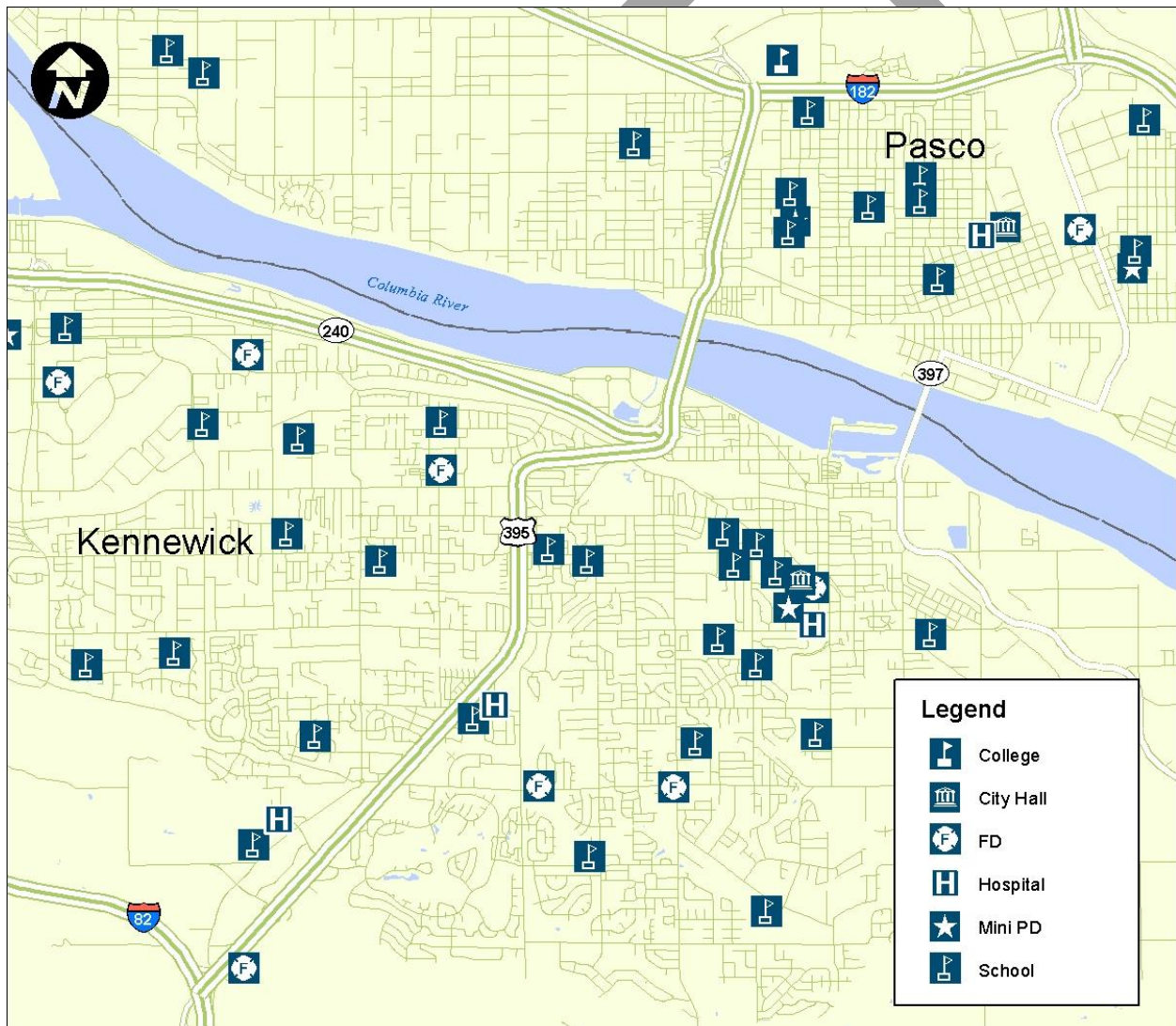


Figure 4-6 – Schools, Government, and Public Services Map

References

Benton County GIS Data, 2009

Noise

WSDOT complies with all local, state and federal environmental regulations regarding noise generated from traffic and construction. The department has also developed a noise policy that applies to all projects within the state, as required by the Federal Highway Administration (FHWA).

Traffic Noise Mitigation

WSDOT performs noise analysis when a project:

- constructs a highway at a new location
- significantly modifies the existing vertical and/or horizontal alignment
- adds traffic through-lanes to a highway

Any area found to be impacted by traffic noise, within the 20-year design, is then considered for noise mitigation. These findings are then used to determine if noise walls would be appropriate and cost-effective.

Existing Noise Walls

The only existing noise wall in the corridor area is located on the left side of US 395, between Yelm Street and the West Canal Drive over crossing. This wall was constructed by the FHWA as part of a WSDOT project.

Retro-fit Noise Walls

Retro-fit walls are noise walls constructed in high-noise neighborhoods that existed before the highway. This program competes for funding with other programs, such as safety improvements and pedestrian accommodations. Because of this, WSDOT installs, on average, one retro-fit noise wall every two years. Table 4-1 shows identified retro-fit noise walls within the corridor.

Begin ARM	End ARM	Left/Right	Location
22.32	22.36	Left	W. 19 th Avenue
25.83	26.09	Right	Flamingo Mobile Home Community
24.00	24.35	Left	Southwest Columbia River Bridge
26.95	27.04	Left	Wernett Road
26.27	26.56	Left	Riviera Trailer Park

References

WSDOT Traffic Noise Policy and Procedures, October 2012
WSDOT Environmental Services Office - Air Quality, Acoustics and Energy Program

Environmental Justice

Title VI of the Civil Rights Act of 1964 requires all recipients of federal funds to demonstrate how they have ensured their actions do not discriminate against minorities and low income populations. This process is known as Environmental Justice and is part of the environmental documentation completed under the National Environmental Policy Act (NEPA). WSDOT complies with these federal requirements.

References

WSDOT Environmental Services Office